

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
6 October 2005 (06.10.2005)

PCT

(10) International Publication Number
WO 2005/094142 A2

(51) International Patent Classification⁷: **H05H 13/00**

(21) International Application Number:
PCT/JP2005/006579

(22) International Filing Date: 29 March 2005 (29.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-095534 29 March 2004 (29.03.2004) JP

(71) Applicants (for all designated States except US): **JAPAN AS REPRESENTED BY THE PRESIDENT OF NATIONAL CARDIOVASCULAR CENTER** [JP/JP]; 7-1, Fujishirodai 5-chome, Suita-shi, Osaka 5658565 (JP). **MOLECULAR IMAGING LABORATORY, INC.** [JP/JP]; 392-1, Takahata, Hiraokacho, Kakogawa-shi, Hyogo, 6750103 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **IIDA, Hidehiro** [JP/JP]; c/o NATIONAL CARDIOVASCULAR CENTER, 7-1, Fujishirodai 5-chome, Suita-shi, Osaka 5658565 (JP). **INOMATA, Toru** [JP/JP]; c/o NATIONAL CARDIOVASCULAR CENTER, 7-1, Fujishirodai 5-chome, Suita-shi, Osaka 5658565 (JP). **FUJIWARA, Mamoru**

[JP/JP]; c/o NATIONAL CARDIOVASCULAR CENTER, 7-1, Fujishirodai 5-chome, Suita-shi, Osaka 5658565 (JP). **MIURA, Iwao** [JP/JP]; c/o NATIONAL CARDIOVASCULAR CENTER, 7-1, Fujishirodai 5-chome, Suita-shi, Osaka 5658565 (JP). **OTA, Toshihiro** [JP/JP]; c/o MOLECULAR IMAGING LABORATORY, INC., 392-1, Takahata, Hiraokacho, Kakogawa-shi, Hyogo 6750103 (JP).

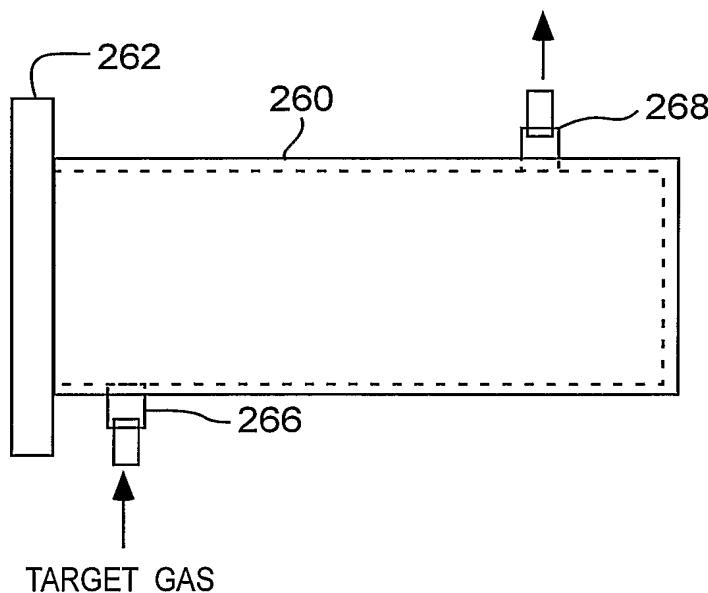
(74) Agents: **KAWAMIYA, Osamu et al.**; AOYAMA & PARTNERS, IMP Building, 3-7, Shiromi 1-chome, Chuo-ku, Osaka-shi, Osaka 5400001 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: PARTICLE BEAM ACCELERATOR



(57) Abstract: A particle beam generator has a vacuum chamber, a magnet which generates a constant magnetic field in the vacuum chamber, acceleration electrodes which generates a magnetic field in a direction perpendicular to the direction of the magnetic field generated by the magnet in the vacuum chamber, a take-out electrode which takes out charged particles accelerated in the vacuum chamber; and a target cell provided at a position at which the charged particles taken out by the taken-out electrode strikes. At least a part of surfaces exposed to the charged particles of the vacuum chamber, the acceleration electrodes, the take-out electrode and/or the target cell is made of a material including an element having atomic number larger than copper.



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *without international search report and to be republished upon receipt of that report*